

****Sexual Orientation: Innate and Unchangeable?****

****Chapters 4-5: The Complexity of the Formation of Homosexual Orientation****

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I could hardly believe it when I read the following in Chapter 5 of the book **Queergedacht**: “Sexual orientation is not subject to change after birth.” I am curious: Where are the empirical studies that prove such a claim?

As a young man, I worked in theater for a while, and during that time and later in my pastoral and psychological counseling practice, I met numerous homosexual individuals. Over time, I realized that every homosexual person is unique, and there is no simple, one-sided model explaining why someone becomes homosexual. One-sided, simplified explanations of causes are counterproductive, and perhaps even hurtful. Many homosexuals have experienced much suffering due to their differences, and we should be careful not to produce even more distortions and stereotypes. The emergence of homosexuality is very complex. We have only begun to slowly grasp this in recent years.

I find it very good that an effort is being made to let those affected speak or write for themselves, or to better understand these individuals through questioning. This is very important for us and our communities. However, there are some significant criticisms in the article that I must critically examine regarding the theory of origin:

1. The exclusively biological explanation. The author primarily argues with chromosomes, mutations, twin studies, immunological, and genetic studies.

When we try to explain homosexuality mainly through somatics (genetics, neuroscience), it is as if someone confuses a tree with a single branch that only shows the material, thus physical side of a person. This contradicts the holistic view of the Bible of a unity of body, spirit, and soul.

We know that reality is much more complex. There are, in fact, larger branches on the tree that describe other scientific disciplines. These include developmental psychology, personality psychology, psychotherapy, psychotraumatology, etc.

Scientifically speaking, it is crucial to try to see the whole tree as much as possible, including psychosocial and biblical perspectives. This is strenuous but liberating.

Unfortunately, there are further serious flaws in the article:

2. Genetic and neurological scientific studies are overemphasized!

In addition to immunological and neurological studies, genetic arguments are primarily used.

The author of **Queergedacht** cites, among others, the largest genetic study on homosexuality from 2019 involving nearly half a million people (Ganna et al. 2019).

In the conclusion to his cited studies, he writes: “There is strong scientific evidence that a person's sexual orientation is partially inherited and largely determined by prenatal factors (no significant postnatal factors have been demonstrated)...” ... “the sexual orientation is not subject to change after birth. Therefore, it should be considered a result of normal biological development. If it is normal, then the consequences should also be allowed...”

The problem is that the geneticists and neuroscientists cited by the author specifically warn against interpreting this data in such a way:

The genome researchers of 2019 found, for example, five abnormalities among hundreds of thousands of genome markers they examined, but they comment on their research as follows:

“Nevertheless, there are still many uncertainties that need to be explored, such as how sociocultural influences could interact with sexual preference and genetic influences.”

They also write: “We have identified genome-wide significant loci associated with same-sex sexual behavior and found evidence for a broader contribution of general genetic variation. We determined that the underlying genetic architecture is highly complex; there is certainly no single genetic determinant (sometimes referred to in the media as the ‘gay gene’)... All measured common variants together explain only a part of the genetic heritability at the population level and do not allow for a meaningful prediction of an individual's sexual preference.”

“Our results provide insights into the biological foundations of same-sex sexual behavior, but also underline the importance of being cautious of oversimplified conclusions - because behavioral phenotypes are complex, because our genetic findings are rudimentary, and because there is a long history of the misuse of genetic results for social purposes.”

It is a significant difference to note the evaluation by the geneticists involved in the study and the evaluation from the book **Queergedacht**. The study leaders are very cautious. Despite their remarkable findings, they emphasize how complex the situation is, how many uncertainties exist, and that genetics does not allow for a meaningful prediction of sexual orientation, as the significance of sociocultural factors cannot yet be adequately assessed. For the author of our article, however, the result is already established, as he makes an unfounded scientific claim: “the sexual orientation is not subject to change after birth.” But the study clearly contradicts this! Twisting it this way is unscientific and dishonest.

A second branch on the biological tree, with which arguments are made, is neuroscience.

In **Queergedacht**, a bundle of nerve cells in the anterior hypothalamus (INAH3) is mentioned, which is larger in men than in women and gay men. The author also attempts to use this neurological argument for his bold postulate. However, if one consults current German-language and international standard works on neuroscience regarding these arguments, they interpret this phenomenon quite differently. They, too, urge caution:

“The attractive idea that a male homosexual is a man with a feminized and/or demasculinized brain is probably too simplistic.” (Bierbaumer / Schmidt, 2010, p. 589)

In the international standard work on neuroscience by Bear, one can read about this phenomenon in the hypothalamus:

“This finding could suggest a biological basis for homosexuality, but is difficult to interpret in light of complex human behavior” (Bear / Connors / Paradiso 2018, p. 657)

In another recent standard work on biopsychology by Pinel, these phenomena are also attributed little significance:

“There are four brain structures related to sexual activity... however, the observed gender differences at the neuronal level are relatively minor” (Pinel / Barnes / Pauli, 2019, pp. 434-444).

In **Queergedacht**, statements from neuroscience that apparently do not fit the paradigm are missing. For example, studies show that mothers who were exposed to diethylstilbestrol (a synthetic estrogen) during pregnancy gave birth to daughters and sons who were more likely to identify as homosexual. Therefore, there may also be an unnatural origin of this sexual orientation that is attributable to environmental factors (Ehrhardt et al. 1989, 1993; Newbold et al. 1993).

A concerning problem recently discovered by researchers is the amount of hormone residues in drinking water. These enter the water cycle from birth control pills through wastewater from toilets. Unfortunately, these hormones have not yet been filtered out in sewage treatment plants. It has been found that these hormones at least feminize amphibians, and they are also at risk of extinction (Tamschick et al. 2016). Concerns about the potential effects of drinking water or mineral water on human hormonal balance are present and are viewed with concern at various national and federal centers and at the EU level. In science, new carbon-based filter systems are being developed that promise to filter out such hormone residues in the future (Tagliavini / Schäfer 2018).

However, I am not aware of studies on health effects on humans. Yet, there is theoretically the possibility that these hormones could negatively affect hormonal balance in humans and perhaps even sexual orientation.

3. Why are all other scientific disciplines ignored?

A third criticism is the most significant. What the authors of **Queergedacht** fatally leave out are the large branches of psychology, psychotherapy, medicine, or the social and cultural sciences. There are now well-researched, complementary answers to the history of the emergence of homosexuality.

3.1. Branch of Developmental Psychology

Developmental psychologists have been researching the topic of homosexuality for many years. In 1981, US psychologist Michael Storms published the observation that the majority of

people whose sex drive awakens before the age of 13 tend to be homosexual. 60-80% of homosexual men reported that they noticed the onset of their sexual drive before the age of 13, compared to only 20-30% of heterosexuals. In this model, social experience is linked to sexual drive. It is known that during early adolescence, same-sex relationships prevail, peaking at age 12 (Storms 1981). From this perspective, early-maturing adolescents may become more homosexual.

Already 10 years earlier, researchers surveyed adult homosexual men who reported that their sexual feelings emerged earlier than those of heterosexual men (Saghir / Robins 1971).

The critical time for sexual awakening thus lies before the age of 13. In this regard, the question arises whether our society and media could influence the earlier awakening of sexuality through the strong sexualization of children and teenagers.

3.2. Psychotherapeutic and Psychotraumatological Branch

This may even be the largest of all, unfortunately also the saddest! There are numerous studies showing that homosexual or LGBTQ+ individuals suffer significantly more from depression, anxiety, addictions, other illnesses, and even suicidal thoughts. The suicide rate is dramatically increasing, even among adolescents. One reason is: discrimination (Fergusson 1999; Haas et al. 2010; Pereira 2015; Miranda-Mendizábal 2017; Ream 2019; Spittlehouse 2020).

These findings should evoke great understanding and compassion in our dealings with them. We should also reflect on Jesus and His interactions with people. He was truly unique. He did not change a jot of the law, but He invited every person with the greatest possible love to come to Him and lay down their burdens. He did not condemn sinners but encouraged them not to sin anymore. All kinds of suffering people flocked to Him. Some homosexuals have told me that they are desperate about how unlovingly they have been treated in some congregations. Here we still have much to learn. But that is not all. Their suffering is much greater.

Recent studies (Schnarrs et al. 2019; Tran et al. 2022) have gone one step further and examined life in youth and early childhood, finding that many LGBTQ individuals experienced terrible things in early childhood, so-called “ACEs” (adverse childhood experiences), which are severely distressing and traumatic experiences, such as:

- Experiencing violence, sexual abuse, or physical neglect
- Witnessing violence in the home
- Witnessing a suicide

These early traumas undermine feelings of safety, stability, and attachment. Often, individuals are not even aware of what they experienced because the brain has deeply repressed it. But the terrible consequences do not just disappear. That is tragic.

Moreover, many LGBTQ+ individuals are significantly more likely to have chronic illnesses than heterosexuals. They also take their own lives much more frequently. No wonder, if many

homosexuals were traumatized in childhood in their parental homes and later discriminated against again because of their orientation.

It cannot yet be reliably proven that ACEs can also be responsible for a changed sexual orientation in the sense of LGBTQ+, but some researchers see this as a possible and plausible factor that could add to other factors:

“It should be noted that the factors that could mediate the connection between childhood sexual abuse and sexual orientation are not yet clarified. This is particularly important, as the results could be politically used to associate childhood sexual abuse with homosexuality in the eyes of the public. The methodology and measures used in this study do not allow for questions of causality to be clarified. Sexuality, in the broadest sense, is one of the important areas that can be affected by childhood sexual abuse... It is therefore plausible to assume that early sexual experiences, including experiences of abuse, are among the countless factors that can influence a person's sexual attraction, behavior, and identity.” (Balsam et al. 2005)

3.3. Recent Studies on Personality Psychology, Pediatric Research, and Media Psychology

It is also important to know that there are homosexual and LGBTQ+ individuals who have changed their sexual attraction over the course of their lives.

From personality psychology, we know that there are personalities that are much more open to new experiences than others, much more experimental. Various personality traits may come into play, related to “openness to new experiences,” “curiosity,” “willingness to take risks,” or “conscientiousness.” Meta-studies show small to moderate differences in personality traits among heterosexual, homosexual, and bisexual individuals (Lippa 2005; Allen 2020).

Everyday romantic temptations also play a significant role, especially among younger people, and can have a considerable influence on their sexual orientation.

In recent years, studies have been accumulating that outline a new understanding of the complexity of sexual identity formation and its changeability or “fluidity” (Diamond 2009; 2016; 2021; Katz-Wise et al. 2016; Diamond et al. 2017; Stewart 2019).

Researchers at Boston University's Children's Hospital studied 4,087 adolescents aged 14 to 25. Among them, 58% identified as cisgender girls/women, 38% as cisgender boys/men, and 5% as transgender or non-binary individuals. They found:

“In the entire sample, 17% reported a retrospective change in identity and 33% reported a change in attraction. The participants most likely to report an identity change were in the younger age group (14-17 years).

These studies show that, especially for a portion of transgender youth, sexual identity or attraction is indeed changeable (Katz-Wise et al. 2023).

In another American study from 2019, it was found that among non-heterosexual girls, 59% and among non-heterosexual boys, 16%, at least one of their last two sexual partners was of the opposite gender. In contrast, among heterosexual identified girls, only 9% and among heterosexual boys, only 3%. This means that sexual orientation is by no means as rigid as once thought. It is much more fluid, changeable, and can be influenced by external factors (Ybarra et al. 2019).

In addition to new romantic experiences of those affected and their personality structure, the media likely also play a significant role. They are capable of generating countless highly effective romantic offers. Therefore, I am convinced that media studies must also be included in this topic when exploring how and by what means sexual orientations can change over the course of life in the future.

The possibilities of the media are by no means limited to cognitive changes in attitudes. They also create new trends, attractive mindsets, romantic dream worlds through strong emotionalization and become a very effective alternative universe for many suffering youths.

****Conclusion:****

Recent research on sexual orientation, identity, and fluidity shows that neither heterosexual nor LGBTQ+ adolescents have stable sexual orientations, as was long thought. On the contrary, changes in sexual attraction and identity are often possible in this age group, even more so than among heterosexual adolescents.

This brief insight into interdisciplinary consideration shows how one-sided, misleading, and simply scientifically incorrect the representation is that supposedly “sexual orientation is not subject to change after birth.” With distortions and misrepresentations, we do not do justice to the great distress many LGBTQ+ individuals find themselves in. We cannot sustainably help anyone, least of all those affected, especially when they long for a change. We take away all hope from them when we offer them one-sided biological origin concepts on one hand and assert on the other that fundamentally no change is possible. However, how, in what context, and to what extent changes are possible requires further exploration in another article.

1. https://www.bund-naturschutz.de/fileadmin/_migrated/content_uploads/Hormonaktive_Substanzen_im_Wasser.pdf

2 Vgl.

<https://www.laves.niedersachsen.de/startseite/lebensmittel/lebensmittelgruppen/getranke/ostogene-wirkung-von-mineralwasser-schon-im-rohwasser-vorhanden-73687.html>
<https://www.tagesschau.de/ausland/trinkwasser-eu-101.html>

- Allen MS, Robson DA. *Personality and Sexual Orientation: New Data and Meta-analysis.* *J Sex Res*. 2020 Oct;57(8):953-965.

- *Balsam, K. F., Rothblum, E. D., & Beauchaine, T. P. (2005). Victimization Over the Life Span: A Comparison of Lesbian, Gay, Bisexual, and Heterosexual Siblings. *Journal of Consulting and Clinical Psychology*, 73(3), 477–487.*
- *Bear, Mark F. / Connors, Barry W. / Paradiso, Michael A. * Neurowissenschaften: Ein grundlegendes Lehrbuch für Biologie, Medizin und Psychologie *. Heidelberg: Springer, 2018.*
- *Bierbaumer, Nils / Schmidt, Robert. * Biologische Psychologie *. Heidelberg: Springer Verlag, 2010.*
- *Diamond, Lisa M. *Sexual Fluidity: Understanding Women's Love and Desire* (Cambridge: Harvard University Press, 2009).*
- *Diamond LM, Dickenson JA, Blair KL. Stability of Sexual AtTRACTIONS Across Different Timescales: The Roles of Bisexuality and Gender. *Arch Sex Behav* 2017 Jan;46(1):193-204.*
- *Diamond, LM. "Sexual Fluidity in Male and Females," *Current Sexual Health Reports* 8 (2016): 249-256.*
- *Diamond, LM. "The New Genetic Evidence on Same-Gender Sexuality: Implications for Sexual Fluidity and Multiple Forms of Sexual Diversity," *Journal of Sex Research* 58.7 (Sept 2021): 818-837.*
- *Ehrhardt AA, Meyer-Bahlburg HF, Rosen LR, Feldman JF, Veridiano NP, Zimmerman I, McEwen BS. Sexual orientation after prenatal exposure to exogenous estrogen. *Arch Sex Behav*. 1985 Feb;14(1):57-77. doi: 10.1007/BF01541353. PMID: 3977584.*
- *Ehrhardt AA, Meyer-Bahlburg HF, Rosen LR, Feldman JF, Veridiano NP, Elkin EJ, McEwen BS. The development of gender-related behavior in females following prenatal exposure to diethylstilbestrol (DES). *Horm Behav*. 1989 Dec;23(4):526-41. doi: 10.1016/0018-506X(89)90040-8. PMID: 2606466.*
- *Fergusson, D.M. "Is sexual orientation related to mental health problems and suicidality in young people?" *Arch Gen Psychiatry*, vol. 56, Oct. 1999, pp. 876-80.*
- *Ganna A, Verweij KJH, Nivard MG, Maier R, Wedow R, Busch AS, Abdellaoui A, Guo S, Sathirapongsasuti JF; 23andMe Research Team; Lichtenstein P, Lundström S, Långström N, Auton A, Harris KM, Beecham GW, Martin ER, Sanders AR, Perry JRB, Neale BM, Zietsch BP. Large-scale GWAS reveals insights into the genetic architecture of same-sex sexual behavior. *Science*. 2019 Aug 30; 365(6456):eaat7693.*
- *Haas AP, Eliason M, Mays VM, et al. Suicide and suicide risk in lesbian, gay, bisexual, and transgender populations: review and recommendations. *J Homosex*. 2010;58:10-51.*

- *Katz-Wise SL, Reisner SL, Hughto JW, Keo-Meier CL. Differences in Sexual Orientation Diversity and Sexual Fluidity in AtTRACTIONS Among Gender Minority Adults in Massachusetts. *J Sex Res*. 2016;53(1):74-84.*
- *Katz-Wise SL, Ranker LR, Gordon AR, Xuan Z, Nelson K. Sociodemographic Patterns in Retrospective Sexual Orientation Identity and Attraction Change in the Sexual Orientation Fluidity in Youth Study. *J Adolesc Health*. 2023 Mar;72(3):437-443.*
- *Lippa RA. Sexual orientation and personality. *Annu Rev Sex Res*. 2005;16:119-53.*
- *Miranda-Mendizábal A, Castellvó P, Almenara J, et al. Sexual orientation and suicidal behavior in adolescents and young adults: systematic review and meta-analysis. *Br J Psychiatry*. 2017;211(2):77-87.*
- *Newbold RR. Gender-related behavior in women exposed prenatally to diethylstilbestrol. *Environ Health Perspect*. 1993 Aug;101(3):208-13. doi: 10.1289/ehp.93101208. PMID: 8404755; PMCID: PMC1519765.*
- *Pereira H, Rodrigues P. Internalized homophobia and suicidal ideation among LGB youth. *J Psychiatry*. 2015;18:229.*
- *Pinel, John P.J. / Barnes, Steven J. / Pauli, Paul. *Biopsychology*. New Jersey: Person Studium, 2019.*
- *Ream GL. What's unique about lesbian, gay, bisexual, and transgender (LGBT) youth and young adult suicides? Findings from the National Violent Death Reporting System. *J Adolesc Health*. 2019;64:602-607.*
- *Saghir, M. T., & Robins, E. (1971). Male and female homosexuality: Natural history. *Comprehensive Psychiatry*, 12(6), 503-510.*
- *Schnarrs PW, Stone AL, Salcido R Jr, Baldwin A, Georgiou C, Nemeroff CB. Differences in adverse childhood experiences (ACEs) and quality of physical and mental health between transgender and cisgender sexual minorities. *J Psychiatr Res*. 2019 Dec;119:1-6.*
- *Spittlehouse JK, Boden JM, Horwood LJ. Sexual orientation and mental health over the life course in a birth cohort. *Psychol Med*. 2020;1-8.*
- *Stewart JL, Spivey LA, Widman L, Choukas-Bradley S, Prinstein MJ. Developmental patterns of sexual identity, romantic attraction, and sexual behavior among adolescents over three years. *J Adolesc*. 2019 Dec;77:90-97.*
- *Storms, M. D. (1981). A theory of erotic orientation development. *Psychological Review*, 88(4), 340-353.*
- *Tagliavini M, Schäfer AI. Removal of steroid micropollutants by polymer-based spherical activated carbon (PBSAC) assisted membrane filtration. *J Hazard Mater**

2018 Jul 5;353:514-521. doi: 10.1016/j.jhazmat.2018.03.032. Epub 2018 Mar 20. PMID: 29719277.

- *Tamschick S, Rozenblut-Kościsty B, Ogielska M, Lehmann A, Lymberakis P, Hoffmann F, Lutz I, Kloas W, Stöck M. Sex reversal assessments reveal different vulnerability to endocrine disruption between deeply diverged anuran lineages. *Sci Rep*. 2016 Mar 31;6:23825. doi: 10.1038/srep23825. PMID: 27029458; PMCID: PMC4814869.*
- *Tran NM, Henkhaus LE, Gonzales G. Adverse Childhood Experiences and Mental Distress Among US Adults by Sexual Orientation. *JAMA Psychiatry*. 2022;79(4):377–379.*
- *Ybarra ML, Price-Feeney M, Mitchell KJ. A Cross-sectional Study Examining the (In)congruency of Sexual Identity, Sexual Behavior, and Romantic Attraction among Adolescents in the US. *J Pediatr*. 2019 Nov;214:201-208.*